



Specialization in Assisted Reproduction courses in collab with Thomas Jefferson University

3 Online self-pace Courses

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Intended for Physicians and Other Healthcare Professionals

Length: 80 hours / 5 months

Certificate price: \$800



COURSE 1

<u>Searching</u> for Sterility <u>Origin</u>



BACKGROUND

The number of women and couples accessing assisted reproductive technology (ART) is increasing every year, primarily because parenthood has been postponed.

The evaluation and management of infertility has changed substantially over the past ten to fifteen years. Several tests, proven to be of limited value in the study of patients, have been discarded and replaced by newer and more effective tests, while significant advances have been made in ultrasound evaluation. In addition, there have been advances in the surgical approach to pathologies related to sterility, which have led to a greater use of endoscopy and less invasive techniques.

Clinicians who treat patients with infertility face several challenges in selecting the appropriate diagnostic and treatment options for both their male and female patients. Some of the options, particularly when related to advanced maternal age or low responders, are not well-known among gynecologists and primary care physicians. Also, among gynecologists and PCPs there is still not a clear understanding regarding the precise indications of treatment in male/female infertility and some pathologies, such as in the case of adenomyosis.

This education program has been developed to help clinicians better diagnose and treat sterility.

COURSE 2

<u>Assisted</u> <u>Reproduction</u> <u>Techniques</u>



BACKGROUND

Management of infertility with assisted reproductive technology (ART) has changed substantially over the past ten to fifteen years due to the application of new technological advancements in this field and a better understanding of reproductive pathophysiology, particularly in female patients.

Thanks to this more in-depth and precise knowledge of gynecological endocrinology, new stimulation protocols have emerged, enabling fertility medicine practitioners to more easily adapt to patient-specific situations and minimize risks, resulting in an increased probability of having one healthy baby. Some tests, such as monogenic disease screening and preimplantation genetic testing (PCT), have also increased success rates. New technical advances have allowed oocytes in vitro maturation or oocyte/embryo vitrification to be achieved with a greater level of safety as well. In addition, embryos can be evaluated and selected in a more accurate way during in vitro fertilization (IVF) cycles thanks to the use of artificial intelligence.

Clinicians who treat patients with infertility can face several challenges, including selecting the appropriate treatment options for patients and managing complications that can arise from ART. Some treatment options, particularly those related to the incorporation of new ART techniques, are not well-known or well-understood within the community of OBGYN physicians and nurses. This educational program has been developed to provide an in-depth overview of the latest updates in ART.

SKILLS

- >To identify situations related to sterility/infertility
- >To determine when it is necessary to order studies on patients and which tests are needed
- >To determine the cause of infertility and a diagnosis by analyzing information from a patient's medical history and examinations
- >To understand when to utilize surgical interventions before ART

SKILLS

- >To identify the most appropriate ovarian stimulation or endometrial preparation regimen
- >To select the cases in which a more precise evaluation or selection of gametes or embryos is indicated
- >To maximize the chances of having a healthy live newborn
- >To understand the application of genetics in assisted reproduction
- >To prevent or treat ART side effects

COURSE 3 <u>New Challenges</u> <u>in Infertility</u> <u>Treatments</u>



BACKGROUND

Management of infertility with assisted reproductive technology (ART) has changed substantially over the past ten to fifteen years due to the application of new technological advancements in this field and a better understanding of reproductive pathophysiology.

Today, ART can be used not only in patients experiencing infertility but also in those who experience recurrent miscarriage, have chronic viral infections, or have cancer. ART can reduce the time it takes to achieve pregnancy, reduce the risk of viral infection transmission, and allow for fertility preservation (FP).

In the same way, knowledge from other medical fields, such as genetics and immunology, and the use of techniques such as next-generation sequencing (NCS), which studies microbiome or endometrial receptivity, facilitate a multidisciplinary approach that can help improve reproductive outcomes.

Clinicians who treat patients with infertility can face several challenges in selecting the appropriate treatment option for their patients, including successfully addressing implantation failure or applying ART to other special situations where it could contribute to fertility preservation or risk management.

This education program is designed to offer a multidisciplinary approach to ART to maximize clinical outcomes in this field.

SKILLS

- >To detect circumstances where a multidisciplinary approach to ART would be prudent
- >To rely on expertise from disciplines adjacent to or outside of fertility medicine, such as genetics, cancer, immunology, and microbiology
- >To successfully treat patients who have cancer, implantation failure, or persistent viral infections
- >To develop the diagnostic algorithm and determine the additional tests each patient requires in accordance with his or her underlying pathology and to personalize a therapy approach

PROGRAM

Module 1

FEMALE STERILITY:

- >Ultrasound in reproductive medicine
 >Endometriosis
 >Uterine fibroids
 >Adenomyosis
 >Müllerian malformations
- >Hydrosalpinx
- >Poor response

Module 2

MALE STERILITY:

- >Andrological assessment >Varicocele
- >Seminal tract infection
- >Sperm freezing/semen banks
- >Genetic origin of male infertility

PROGRAM

- >Preimplantation genetic testing (PGT)
- >Vitrification of oocytes and embryos
- >Oocyte in vitro maturation
- >Sperm selection for in vitro fertilization (IVF)
- >Artificial intelligence
- >Medications for ovarian stimulation
- >Annex. Schemes of stimulation protocols for IVF and endometrial preparation
- >New stimulation protocols
- >Preconception genetic compatibility test
- >Complications that can arise from assisted

reproduction techniques

PROGRAM

Module 1

Special situations in human reproduction:

- >Recurrent miscarriage
- >Implantation failure
- >Chronic viral infections
- (HIV or hepatitis) and reproduction >SARS-CoV-2 and assisted
- reproduction
- >Approach to reproduction in cancer patients

Module 2

Advances in assisted reproduction:

- >Genetics and reproduction
 >Ovarian rejuvenation
- >Endometrial receptivity
- >Microbiome
- >Immunology under the endometrium

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In support of improving patient care, this activity has been planned and implemented by Thomas Jefferson University and IVIRMA Clobal Education. Thomas Jefferson University is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

COURSE 1:

Physicians: This educational activity is designated for a maximum of 30 AMA PRA Category 1 CreditsTM. Physicians should only claim credit commensurate with the extent of their participation in the activity. Other Healthcare Professionals: This educational activity is designated for 30 AMA PRA Category 1 CreditTM. Participants should claim only the credit

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